U.S. Application No.: 10/538,266

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-37. (canceled).

38. (currently amended): A fluorine-containing optical material which comprises a fluorine-containing copolymer comprising from 15-to 62 % by mole 23 to 50 % by mole of a structural unit (a) represented by the formula (1):

$$\begin{array}{c|c}
X^{1} \\
 & \downarrow \\
 & \downarrow$$

wherein X^1 is CH_3 or F; Rf^1 and Rf^2 are CF_3 ; R^1 is CH_3 , from 12 to 70 % by mole 33 to 70 % by mole of a structural unit (b) derived from methyl methacrylate and from 1 to 40 % by mole of a structural unit (c1) (excluding the structural unit (a)) represented by the formula (2):

$$\begin{array}{c|c}
X^2 \\
\hline
CH_2-C \\
\hline
C-O-R^2
\end{array}$$
(2)

wherein X² is H, CH₃ F, CF₃ or Cl; R² is a fluoroalkyl group having 4 to 6 carbon atoms.

39. (canceled).

AMENDMENT UNDER 37 C.F.R. § 1.114(c)

U.S. Application No.: 10/538,266

Attorney Docket No.: Q87376

40. (previously presented): The fluorine-containing optical material of Claim 38, wherein in the fluorine-containing copolymer, R² in the formula (2) representing the structural unit (c1) is represented by the formula (3):

$$-CH_2C_nF_{2n}H (3)$$

wherein n is an integer of from 3 to 5.

- 41. (previously presented): the fluorine-containing optical material of Claim 40, wherein in the fluorine-containing copolymer, R^2 in the formula (2) representing the structural unit (c1) is $-CH_2C_4F_8H$.
- 42. (previously presented): The fluorine-containing optical material of Claim 38, wherein in the fluorine-containing copolymer, X² in the formula (2) representing the structural unit (c1) is -CH₃.
- 43. (previously presented): The fluorine-containing optical material of Claim 38, which has a glass transition temperature of not less than 100°C, a refractive index of not more than 1.440 and a fluorine content of not less than 20% by weight.
- 44. (previously presented): The fluorine-containing optical material of Claim 38, wherein the glass transition temperature is note less than 105°C.
- 45. (previously presented): The fluorine-containing optical material of Claim 38, wherein the refractive index is not more than 1.430.
- 46. (currently amended): The fluorine-containing optical material of Claim 38, wherein the fluorine content is note not less than 30% by weight.

Attorney Docket No.: Q87376

AMENDMENT UNDER 37 C.F.R. § 1.114(c) U.S. Application No.: 10/538,266

- 47. (previously presented): A material for clad of optical fiber which is obtained from the fluorine-containing optical material of Claim 38.
 - 48. (canceled).
- 49. (previously presented): A fluorine-containing copolymer which has a weight average molecular weight of from 10,000 to 1,000,000 and comprises from 15 to 62 % by mole 23 to 50 % by mole of a structural unit (a) represented by the formula (1):

$$\begin{array}{c|c}
X^{1} \\
CH_{2}-C \\
C-O-CH_{2}-C \\
R^{1}
\end{array}$$
(1)

wherein X¹ is CH₃ or F; Rf¹ and Rf² are CF₃; R¹ is CH₃, from 12 to 70 % by mole 33 to 70 % by mole of a structural unit (b) derived from methyl methacrylate and from 1 to 40 % by mole of a structural unit (c2) represented by the formula (2a):

$$\begin{array}{c|c}
X^3 \\
 \hline
 CH_2 - C \\
 \hline
 C-O-R^3 \\
 \hline
 O
\end{array}$$
(2a)

wherein X³ is H, CH₃, F, CF₃ or Cl; R³ is a fluoroalkyl group having 4 to 6 carbon atoms; the structural unit represented by the formula (1) is excluded.

50. (canceled).

AMENDMENT UNDER 37 C.F.R. § 1.114(c) Attorney Docket No.: Q87376

U.S. Application No.: 10/538,266

51. (previously presented): The fluorine-containing copolymer of Claim 49, wherein R³ in the formula (2a) representing the structural unit (c2) is represented by the formula (3):

$$-CH_2C_nF_{2n}H (3)$$

wherein n is an integer of from 3 to 5.

- 52. (previously presented): The fluorine-containing copolymer of Claim 51, wherein R^3 in the formula (2a) representing the structural unit (c2) is $-CH_2C_4F_8H$.
- 53. (previously presented): The fluorine-containing optical material of Claim 49, wherein in the fluorine-containing copolymer, X² in the formula (2a) representing the structural unit (c2) is -CH₃.
- 54. (new): The fluorine-containing optical material of Claim 38, wherein R² of the structural unit (c1) is a fluoroalkyl group having 4 carbon atoms.
- 55. (new): The fluorine-containing optical material of Claim 49, wherein R³ of the structural unit (c2) is a fluoroalkyl group having 4 carbon atoms.